Journal of Luminescence 57 (1993) 351–354
North-Holland

JOURNAL OF
LUMINESCENCE

Author index

Abraham, P., see Sacilotti, M. 57 (1993) 33
Afanasiev, M., see Laiho, R. 57 (1993) 197
Albu-Yaron, A., S. Bastide, J.L. Maurice and C. Lévy-Clément, Morphology of porous n-type silicon obtained by photoelectrochemical etching II. Study of the tangled Si in the nanoporous layer 57 (1993) 67
Allan, G., C. Delerue and M. Lannoo, Excitons in silicon nanostructures 57 (1993) 239
Allan, G., see Lannoo, M. 57 (1993) 243
Allan, G., see Delerue, C. 57 (1993) 249
Ambacher, O., see Rückschloss, M. 57 (1993) 1
Anderle, M., see Calliari, L. 57 (1993) 83
Auderset, H., see Steigmeier, E.F. 57 (1993) 9

Badoz, P.A., see Vincent, G. 57 (1993) 217
Baier, T., see Mauckner, G. 57 (1993) 211
Bastide, S., see Albu-Yaron, A. 57 (1993) 67
Bauhofer, W., see Rüter, D. 57 (1993) 19
Behm, R.J., see Mauckner, G. 57 (1993) 211
Ben Chorin, M., F. Möller and F. Koch, AC conductivity in porous silicon 57 (1993) 159
Berger, M.G., see Münder, H. 57 (1993) 5
Binder, M., see Metzger, H. 57 (1993) 201
Bisi, O., see Calliari, L. 57 (1993) 83
Bomchil, G., see Goudeau, Ph. 57 (1993) 141
Bondarenko, V.P., see Żuk, J. 57 (1993) 57
Bouix, J., see Sacilotti, M. 57 (1993) 33
Brandt, M.S., see Stutzmann, M. 57 (1993) 321
Brumhead, D., see Calcott, P.D.J. 57 (1993) 257
Bsiesy, A., F. Muller, I. Mihalcescu, M. Ligeon, F. Gaspard, R. Herino, R. Romestain and J.C. Vial, Electrically induced selective quenching of porous silicon photoluminescence 57 (1993) 29
Bsiesy, A., see Muller, F. 57 (1993) 283
Bustarret, E., I. Mihalcescu, M. Ligeon, R. Romestain, J.C. Vial and F. Madéore, Comparison of room temperature photoluminescence decays in anodically oxidized crystalline and X-ray-amorphous porous silicon 57 (1993) 105

Calcott, P.D.J., K.J. Nash, L.T. Canham, M.J. Kane and D. Brumhead, Spectroscopic identification of the luminescence mechanism of highly porous silicon (*Invited paper*) 57 (1993) 257
Calliari, L., M. Anderle, M. Ceschini, L. Pavesi, G. Mariotto and O. Bisi, Electron bombardment effects on light emitting porous silicon 57 (1993) 83
Camassel, J., see Massone, E. 57 (1993) 51
Canham, L.T., see Calcott, P.D.J. 57 (1993) 257
Ceschini, M., see Calliari, L. 57 (1993) 83
Ceschini, M., see Pavesi, L. 57 (1993) 131
Chamarro, M., see Grosman, A. 57 (1993) 13
Chamarro, M., see von Bardeleben, H.J. 57 (1993) 39
Chamarro, M., see Morazzani, V. 57 (1993) 45
Champagnon, B., see Sacilotti, M. 57 (1993) 33
Champagnon, B., see Gregora, I. 57 (1993) 73
Chazalviel, J.-N., see Dubin, V.M. 57 (1993) 61

Deak, P., see Stutzmann, M. 57 (1993) 321
Delerue, C., see Allan, G. 57 (1993) 239
Delerue, C., see Lannoo, M. 57 (1993) 243
Delerue, C., M. Lannoo and G. Allan, Theory of the luminescence of porous silicon (*Invited paper*) 57 (1993) 249
Delley, B., see Steigmeier, E.F. 57 (1993) 9
Di Francia, G., P. Menna and M. Falconieri, Effect of substrate roughness on porous silicon light emission 57 (1993) 95
Diaz Calleja, R., see Matveeva, E. 57 (1993) 175
Donegan, J.F., see Xing, J. 57 (1993) 147
Dorofeev, A.M., see Żuk, J. 57 (1993) 57
Dubin, V.M., J.-N. Chazalviel and F. Ozanam, In situ photoluminescence and photomodulated infrared study of porous silicon during etching and in ambient 57 (1993) 61
Dumas, Ph., see Gu, M. 57 (1993) 315

Emanuelsson, P., see Meyer, B.K. 57 (1993) 137
Enachescu, M., E. Hartmann, A. Kux and F. Koch, Surface structure imaging, electronically induced modifications, and electroluminescence of porous silicon by scanning tunneling microscopy 57 (1993) 191

Falconieri, M., see Di Francia, G. 57 (1993) 95
Finkbeiner, S., see Rosenbauer, M. 57 (1993) 153
Finkbeiner, S., J. Weber, M. Rosenbauer and M. Stutzmann, Transient photoluminescence decay in porous silicon and siloxene 57 (1993) 231
Finkbeiner, S., see Stutzmann, M. 57 (1993) 321

Fishman, G., R. Romestain and J.C. Vial, Experimental and theoretical aspects of radiative processes in porous silicon 57 (1993) 235
Foucaran, A., see Massone, E. 57 (1993) 51
Franz, H., see Metzger, H. 57 (1993) 201
French, P.J., see Kaneko, H. 57 (1993) 101
Frohnhoff, S., see Münder, H. 57 (1993) 5
Fuchs, H.D., see Rosenbauer, M. 57 (1993) 153
Fuchs, H.D., see Stutzmann, M. 57 (1993) 321

Galun, E., R. Tenne, A. Lagoubi and C. Lévy-Clément, Room temperature photoluminescence of photoelectrochemically etched n-type Si 57 (1993) 125
Gaspard, F., see Bsiesy, A. 57 (1993) 29
Gaspard, F., see Muller, F. 57 (1993) 283
Goudeau, Ph., A. Naudon, A. Halimaoui and G. Bomchil, SAXS study of the influence of the porous silicon morphology on the photoluminescence efficiency 57 (1993) 141
Gregora, I., B. Champagnon and A. Halimaoui, Nanocrystallites in luminescent porous silicon characterized by Raman scattering 57 (1993) 73
Grosman, A., M. Chamarro, V. Morazzani, C. Ortega, S. Rigo, J. Siejka and H.J. von Bardeleben, Study of anodic oxidation of porous silicon: relation between growth and physical properties 57 (1993) 13
Grosman, A., see von Bardeleben, H.J. 57 (1993) 39
Grosman, A., see Morazzani, V. 57 (1993) 45
Grosman, A., see von Bardeleben, H.J. 57 (1993) 301
Gu, M., C. Syrykh, A. Halimaoui, Ph. Dumas and F. Salvan, Low-energy scanning cathodoluminescence spectroscopy and microscopy of porous silicon layers (*Invited paper*) 57 (1993) 315
Gwilliam, R.M., see Hunt, T.D. 57 (1993) 25

Halimaoui, A., see Gregora, I. 57 (1993) 73
Halimaoui, A., see Goudeau, Ph. 57 (1993) 141
Halimaoui, A., see Vincent, G. 57 (1993) 217
Halimaoui, A., see Gu, M. 57 (1993) 315
Hartmann, E., see Enachescu, M. 57 (1993) 191
Hegarty, J., see Xing, J. 57 (1993) 147
Herino, R., see Bsiesy, A. 57 (1993) 29
Herino, R., see Muller, F. 57 (1993) 283
Hiraki, A., see Ito, T. 57 (1993) 331
Hofmann, D.M., see Meyer, B.K. 57 (1993) 137
Homewood, K.P., see Hunt, T.D. 57 (1993) 25
Houbertz, R., see Mauckner, G. 57 (1993) 211
Hunt, T.D., K.J. Reeson, R.M. Gwilliam, K.P. Homewood, R.J. Wilson and B.J. Sealy, Investigation of the luminescence properties of Si/β$FeSi_2$/Si heterojunction structures fabricated by ion beam synthesis 57 (1993) 25

Ito, T. and A. Hiraki, Aging phenomena of light emitting porous silicon (*Invited paper*) 57 (1993) 331

Jalsovszky, G., see Vázsonyi, É.B. 57 (1993) 121
Jeske, M., see Münder, H. 57 (1993) 223

Kane, M.J., see Calcott, P.D.J. 57 (1993) 257
Kaneko, H., P.J. French and R.F. Wolffenbuttel, Photo- and electro-luminescence from porous Si 57 (1993) 101
Kessener, Y.A.R.R., G.L.J.A. Rikken and A.H.J. Venhuizen, Quenching of porous silicon luminescence at intermediate temperatures 57 (1993) 77
Kessener, Y.A.R.R., see Pulsford, N.J. 57 (1993) 181
Koch, F., see Meyer, B.K. 57 (1993) 137
Koch, F., see Ben Chorin, M. 57 (1993) 159
Koch, F., see Enachescu, M. 57 (1993) 191
Koch, F., V. Petrova-Koch and T. Muschik, The luminescence of porous Si: the case for the surface state mechanism (*Invited paper*) 57 (1993) 271
Koós, M., see Vázsonyi, É.B. 57 (1993) 121
Koshida, N., see Koyama, H. 57 (1993) 293
Koyama, H. and N. Koshida, Electrical properties of luminescent porous silicon (*Invited paper*) 57 (1993) 293
Kozlowski, F., P. Steiner and W. Lang, A model for the electroluminescence of porous n-silicon 57 (1993) 163
Kozlowski, F., see Lang, W. 57 (1993) 169
Kozlowski, F., P. Steiner, M. Sauter and W. Lang, Ultraviolet light from porous silicon by a microscopic discharge 57 (1993) 185
Kozlowski, F., see Lang, W. 57 (1993) 341
Kuduk, R., see Żuk, J. 57 (1993) 57
Kulik, M., see Żuk, J. 57 (1993) 57
Kux, A., see Enachescu, M. 57 (1993) 191

Lagoubi, A., see Galun, E. 57 (1993) 125
Lähderanta, E., see Laiho, R. 57 (1993) 197
Laiho, R., A. Pavlov and T. Tsuboi, Time-resolved photoluminescence spectroscopy of porous silicon 57 (1993) 89
Laiho, R., E. Lähderanta, L. Vlasenko, M. Vlasenko and M. Afanasiev, Magnetic properties of light-emitting porous silicon 57 (1993) 197
Lang, W., see Kozlowski, F. 57 (1993) 163
Lang, W., P. Steiner, F. Kozlowski and H. Sandmaier, Porous silicon light-emitting p–n junction 57 (1993) 169
Lang, W., see Kozlowski, F. 57 (1993) 185
Lang, W., P. Steiner and F. Kozlowski, Porous silicon electroluminescent devices (*Invited paper*) 57 (1993) 341
Lannoo, M., see Allan, G. 57 (1993) 239
Lannoo, M., C. Delerue and G. Allan, Nonradiative recombination on dangling bonds in silicon crystallites 57 (1993) 243
Lannoo, M., see Delerue, C. 57 (1993) 249
Leblanc, F., see Vincent, G. 57 (1993) 217

Lévy-Clément, C., see Albu-Yaron, A. 57 (1993) 67
Lévy-Clément, C.., see Galun, E. 57 (1993) 125
Ligeon, M., see Bsiesy, A. 57 (1993) 29
Ligeon, M., see Bustarret, E. 57 (1993) 105
Ligeon, M., see Mihalcescu, I. 57 (1993) 111
Ligeon, M., see Muller, F. 57 (1993) 283
Liśkiewicz, J., see Żuk, J. 57 (1993) 57
Lous, E.J., see Pulsford, N.J. 57 (1993) 181
Lüth, H., see Münder, H. 57 (1993) 57

Mączka, D., see Żuk, J. 57 (1993) 57
Madéore, F., see Bustarret, E. 57 (1993) 105
Mariotto, G., see Calliari, L. 57 (1993) 83
Martínez-Duart, J.M., see Matveeva, E. 57 (1993) 175
Massone, E., A. Foucaran and J. Camassel, Optical investigation of porous silicon membranes 57 (1993) 51
Matveeva, E., V.P. Parkhutik, R. Diaz Calleja and J.M. Martínez-Duart, Growth of polyaniline films on porous silicon layers 57 (1993) 175
Mauckner, G., T. Walter, T. Baier, K. Thonke, R. Sauer, R. Houbertz, U. Memmert and R.J. Behm, Luminescence properties and surface topography of porous silicon 57 (1993) 211
Maurice, J.L., see Albu-Yaron, A. 57 (1993) 67
Memmert, U., see Mauckner, G. 57 (1993) 211
Menna, P., see Di Francia, G. 57 (1993) 95
Metzger, H., H. Franz, M. Binder, J. Peisl and V. Petrova-Koch, X-ray investigation of porous silicon under angles of grazing incidence and exit 57 (1993) 201
Meyer, B.K., D.M. Hofmann, W. Stadler, V. Petrova-Koch, F. Koch, P. Emanuelsson and P. Omling, Photoluminescence and optically detected magnetic resonance investigations on porous silicon 57 (1993) 137
Mihalcescu, I., see Bsiesy, A. 57 (1993) 29
Mihalcescu, I., see Bustarret, E. 57 (1993) 105
Mihalcescu, I., M. Ligeon, F. Muller, R. Romestain and J.C. Vial, Surface passivation: a critical parameter for the visible luminescence of electrooxidised porous silicon 57 (1993) 111
Möller, F., see Ben Chorin, M. 57 (1993) 159
Monteil, Y., see Sacilotti, M. 57 (1993) 33
Morazzani, V., see Grosman, A. 57 (1993) 13
Morazzani, V., see von Bardeleben, H.J. 57 (1993) 39
Morazzani, V., M. Chamarro, A. Grosman, C. Ortega, S. Rigo, J. Siejka and H.J. von Bardeleben, Partial oxidation of porous silicon by thermal process: study of structure and electronic defects 57 (1993) 45
Morazzani, V., see von Bardeleben, H.J. 57 (1993) 301
Morf, R., see Steigmeier, E.F. 57 (1993) 9
Muller, F., see Bsiesy, A. 57 (1993) 29
Muller, F., see Mihalcescu, I. 57 (1993) 111
Muller, F., R. Herino, M. Ligeon, F. Gaspard, R. Romestain, J.C. Vial and A. Bsiesy, Photoluminescence and electroluminescence from electrochemically oxidized porous silicon layers (*Invited paper*) 57 (1993) 283
Münder, H., M.G. Berger, S. Frohnhoff, M. Thönissen and H. Lüth, A non-destructive study of the microscopic structure of porous Si 57 (1993) 5
Münder, H., see Rossow, U. 57 (1993) 205
Münder, H., M.G. Berger, S. Frohnhoff, M. Thönissen, H. Lüth, M. Jeske and J.W. Schultze, Investigation of different oxidation processes for porous Si by XPS 57 (1993) 223
Muschik, T., see Koch, F. 57 (1993) 271

Nash, K.J., see Calcott, P.D.J. 57 (1993) 257
Naudon, A., see Goudeau, Ph. 57 (1993) 141

Omling, P., see Meyer, B.K. 57 (1993) 137
Ortega, C., see Grosman, A. 57 (1993) 13
Ortega, C., see von Bardeleben, H.J. 57 (1993) 39
Ortega, C., see Morazzani, V. 57 (1993) 45
Ortega, C., see von Bardeleben, H.J. 57 (1993) 301
Ozanam, F., see Dubin, V.M. 57 (1993) 61

Parkhutik, V.P., see Matveeva, E. 57 (1993) 175
Pavesi, L., see Calliari, L. 57 (1993) 83
Pavesi, L., M. Ceschini and F. Rossi, Photoluminescence of porous silicon 57 (1993) 131
Pavesi, L., see Pivac, B. 57 (1993) 227
Pavlov, A., see Laiho, R. 57 (1993) 89
Peisl, J., see Metzger, H. 57 (1993) 201
Petrova-Koch, V., see Meyer, B.K. 57 (1993) 137
Petrova-Koch, V., see Metzger, H. 57 (1993) 201
Petrova-Koch, V., see Koch, F. 57 (1993) 271
Pivac, B., B. Rakvin and L. Pavesi, Radiation effects on porous silicon 57 (1993) 227
Pócsik, I., see Vázsonyi, É.B. 57 (1993) 121
Polatoglou, H.M., Optical properties of H terminated Si quantum wires 57 (1993) 117
Pulsford, N.J., G.L.J.A. Rikken, Y.A.R.R. Kessener, E.J. Lous and A.H.J. Venhuizen, Carrier injection and transport in porous silicon Schottky diodes 57 (1993) 181

Rakvin, B., see Pivac, B. 57 (1993) 227
Reeson, K.J., see Hunt, T.D. 57 (1993) 25
Rigo, S., see Grosman, A. 57 (1993) 13
Rigo, S., see von Bardeleben, H.J. 57 (1993) 39
Rigo, S., see Morazzani, V. 57 (1993) 45
Rikken, G.L.J.A., see Kessener, Y.A.R.R. 57 (1993) 77
Rikken, G.L.J.A., see Pulsford, N.J. 57 (1993) 181
Romestain, R., see Bsiesy, A. 57 (1993) 29
Romestain, R., see Bustarret, E. 57 (1993) 105
Romestain, R., see Mihalcescu, I. 57 (1993) 111
Romestain, R., see Fishman, G. 57 (1993) 235

Romestain, R., see Muller, F. 57 (1993) 283
Rosenbauer, M., M. Stutzmann, H.D. Fuchs, S. Finkbeiner and J. Weber, Temperature dependence of luminescence in porous silicon and related materials 57 (1993) 153
Rosenbauer, M., see Finkbeiner, S. 57 (1993) 231
Rosenbauer, M., see Stutzmann, M. 57 (1993) 321
Rossi, F., see Pavesi, L. 57 (1993) 131
Rossow, U., H. Münder, M. Thönissen and W. Theiß, Characterisation of porous silicon layers by spectroscopic ellipsometry 57 (1993) 205
Rückschloss, M., O. Ambacher and S. Veprek, Structural aspects of light emitting nc-Si prepared by plasma CVD 57 (1993) 1
Rüter, D. and W. Bauhofer, Preparation of porous silicon by spark erosion 57 (1993) 19

Sacilotti, M., B. Champagnon, P. Abraham, Y. Monteil and J. Bouix, Properties of type II interfaces in semiconductor heterojunctions, application to porous silicon 57 (1993) 33
Sagnes, I., see Vincent, G. 57 (1993) 217
Salvan, F., see Gu, M. 57 (1993) 315
Sandmaier, H., see Lang, W. 57 (1993) 169
Sauer, R., see Mauckner, G. 57 (1993) 211
Sauter, M., see Kozlowski, F. 57 (1993) 185
Schultze, J.W., see Münder, H. 57 (1993) 223
Sealy, B.J., see Hunt, T.D. 57 (1993) 25
Siejka, J., see Grosman, A. 57 (1993) 13
Siejka, J., see von Bardeleben, H.J. 57 (1993) 39
Siejka, J., see Morazzani, V. 57 (1993) 45
Siejka, J., see von Bardeleben, H.J. 57 (1993) 301
Stadler, W., see Meyer, B.K. 57 (1993) 137
Steigmeier, E.F., H. Auderset, B. Delley and R. Morf, Visible light emission from Si materials 57 (1993) 9
Steiner, P., see Kozlowski, F. 57 (1993) 163
Steiner, P., see Lang, W. 57 (1993) 169
Steiner, P., see Kozlowski, F. 57 (1993) 185
Steiner, P., see Lang, W. 57 (1993) 341
Stelmakh, V.F., see Żuk, J. 57 (1993) 57
Stievenard, D., see von Bardeleben, H.J. 57 (1993) 301
Stutzmann, M., see Rosenbauer, M. 57 (1993) 153
Stutzmann, M., see Finkbeiner, S. 57 (1993) 231
Stutzmann, M., M.S. Brandt, M. Rosenbauer, H.D. Fuchs, S. Finkbeiner, J. Weber and P. Deak, Luminescence and optical properties of siloxene (*Invited paper*) 57 (1993) 321
Syrykh, C., see Gu, M. 57 (1993) 315

Tenne, R., see Galun, E. 57 (1993) 125
Theiß, W., see Rossow, U. 57 (1993) 205
Thönissen, M., see Münder, H. 57 (1993) 5
Thönissen, M., see Rossow, U. 57 (1993) 205
Thönissen, M., see Münder, H. 57 (1993) 223
Thonke, K., see Mauckner, G. 57 (1993) 211
Tsuboi, T., see Laiho, R. 57 (1993) 89

Vázsonyi, É.B., M. Koós, G. Jalsovszky and I. Pócsik, The role of hydrogen in luminescence of electrochemically oxidized porous Si layer 57 (1993) 121
Venhuizen, A.H.J., see Kessener, Y.A.R.R. 57 (1993) 77
Venhuizen, A.H.J., see Pulsford, N.J. 57 (1993) 181
Veprek, S., see Rückschloss, M. 57 (1993) 1
Vial, J.C., see Bsiesy, A. 57 (1993) 29
Vial, J.C., see Bustarret, E. 57 (1993) 105
Vial, J.C., see Mihalcescu, I. 57 (1993) 111
Vial, J.C., see Fishman, G. 57 (1993) 235
Vial, J.C., see Muller, F. 57 (1993) 283
Vincent, G., F. Leblanc, I. Sagnes, P.A. Badoz and A. Halimaoui, Investigation of optical properties of free-standing porous silicon films by absorption and mirage effect 57 (1993) 217
Vlasenko, L., see Laiho, R. 57 (1993) 197
Vlasenko, M., see Laiho, R. 57 (1993) 197
von Bardeleben, H.J., see Grosman, A. 57 (1993) 13
von Bardeleben, H.J., M. Chamarro, A. Grosman, V. Morazzani, C. Ortega, J. Siejka and S. Rigo, Pb-defects and visible photoluminescence in porous silicon 57 (1993) 39
von Bardeleben, H.J., see Morazzani, V. 57 (1993) 45
von Bardeleben, H.J., C. Ortega, A. Grosman, V. Morazzani, J. Siejka and D. Stievenard, Defect and structure analysis of n^+-, p^+- and p-type porous silicon by the electron paramagnetic resonance technique (*Invited paper*) 57 (1993) 301

Walter, T., see Mauckner, G. 57 (1993) 211
Weber, J., see Rosenbauer, M. 57 (1993) 153
Weber, J., see Finkbeiner, S. 57 (1993) 231
Weber, J., see Stutzmann, M. 57 (1993) 321
Wilson, R.J., see Hunt, T.D. 57 (1993) 25
Wolffenbuttel, R.F., see Kaneko, H. 57 (1993) 101

Xing, J., J.F. Donegan and J. Hegarty, A fluorescence-line-narrowing study of the broad porous-silicon luminescence band 57 (1993) 147

Zhukovski, P.V., see Żuk, J. 57 (1993) 57
Żuk, J., R. Kuduk, M. Kulik, J. Liśkiewicz, D. Mączka, P.V. Zhukovski, V.F. Stelmakh, V.P. Bondarenko and A.M. Dorofeev, Ionoluminescence of porous silicon 57 (1993) 57

Journal of Luminescence 57 (1993) 355
North-Holland

JOURNAL OF
LUMINESCENCE

Subject index

Absorption 217
Aging 331
Anodic oxidation 13, 111, 121, 283

Carrier injection 181
Cathodoluminescence 191, 315
Conductivity 159, 181, 293

Decay time 89, 105, 111, 211, 231

Electrochemistry 67, 175
Electroluminescence 101, 163, 169, 283, 341
Electron irradiation 83
Electron paramagnetic resonance (EPR) 13, 39, 45, 197, 227, 301
Ellipsometry 205
Exchange splitting 235
Exciton 239

Ferromagnetism 197
Fluorescence line narrowing 147, 257

In situ measurements 61
Ionoluminescence 57
Irradiation 227

Luminescence
– ultraviolet 185

Mirage effect 217

Non-radiative processes 243

Optically detected magnetic resonance (ODMR) 137, 321
Oxidation 223

Passivation 111
Photoconductivity 293
Photoluminescence 1, 9, 19, 25, 39, 45, 77, 89, 95, 101, 105, 125, 131, 137, 153, 211, 231, 271, 283, 321, 331
– infrared spectroscopy 61
– quenching 29, 293
– transmission 51
Plasma CVD 1

Quantum dot 235

Radiative processes 235, 257
Raman spectroscopy 5, 9, 73
Roughness 95
Rutherford backscattering spectroscopy (RBS) 45

Scanning tunneling microscopy (STM) 191, 211, 315
Spark erosion 9, 19
Spectroscopy
– excitation 131
– infrared 121
Surface states 271

Temperature dependence 77, 153
Thermal oxidation 45
Tight-binding calculation 117, 239, 249
Transmission electron microscopy 67
Type II interface 33

X-ray diffraction 201
X-ray photoemission (XPS) 223
X-ray scattering 141